

Stantec Consulting Services Inc.

3017 Kilgore Road Suite 100 Rancho Cordova CA 95670

Tel: (916) 861-0400 Fax: (916) 861-0430

December 20, 2013

RECEIVED

By Alameda County Environmental Health at 8:47 am, Dec 27, 2013

Mr. Jerry Wickham Alameda County Environmental Health Services Environmental Protection 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

RE: Enclosed Quarterly Groundwater Monitoring Report, Fourth Quarter 2013

7-Eleven Store #32266 1339 North Vasco Road Livermore, CA 94551 Stantec Project #:185750084.300.0506

Dear Mr. Wickham:

Stantec Consulting Services Inc. has been designated as Limited Agent of 7-Eleven, Inc. (7-Eleven) for the purposes of executing and delivering instruments and documents on behalf of 7-Eleven (see attached Limited Authorization form).

We declare, under penalty of perjury, that the information and/or recommendations contained in the attached assessment report are true and correct to best of our knowledge.

Should you have any questions regarding this site, please contact the undersigned at (916) 384-0706.

Sincerely,

Stantec Consulting Services Inc.

Danielle Manning Associate Scientist Project Manager MAGEE Amanda Magee, P.G. Associate Geologist

OF CALIF

LIMITED AUTHORIZATION

KNOW ALL MEN BY THESE PRESENTS:

That 7-ELEVEN, INC. ("7-Eleven"), a Texas corporation, acting by and through Doug Rosencrans, Vice President, does hereby nominate, constitute and appoint STANTEC CONSULTING SERVICES INC. a Delaware corporation formerly known as Stantec Consulting Corporation, as Limited Agent ("Agent") of 7-Eleven, for purposes of executing and delivering instruments and documents as more particularly described below, and does hereby grant, delegate and invest said Agent with power and authority to execute and deliver for, in the name of, and on behalf of 7-Eleven, and in connection with that certain Amended and Restated Agreement by and between 7-Eleven and Agent dated as of January 1, 2010 (as amended, the "Agreement"), the instruments and documents listed in Attachment I hereto.

Agent may exercise the power and authority herein granted, delegated and invested, in any particular and appropriate transaction or matter, as an agent of 7-Eleven. Any instruments and documents executed and delivered by Agent under this Limited Authorization shall be acts of 7-Eleven and may be relied upon by third parties dealing with 7-Eleven, such acts being hereby ratified and confirmed by virtue hereof. Agent shall deliver all instruments and documents executed and delivered by Agent under this Limited Authorization to 7-Eleven promptly following such execution and delivery.

Any and all acts of Agent hereunder shall comply with all applicable federal, state and local laws, regulations, rules and ordinances and with all applicable orders of any courts of competent jurisdiction.

This Limited Authorization shall expire upon the expiration or earlier termination of the Agreement, except as otherwise provided therein, or may be terminated at any time for any reason by 7-Eleven.

APPROVED AND EXECUTED this 10th day of January, 2012, to be effective as of the date hereof.

7-ELEVEN, INC.

ATTEST:

Assistant Secretary

Name: Doug Rosencrans

Title Vice President

STATE OF TEXAS
COUNTY OF DALLAS

BEFORE ME, the undersigned, a Notary Public in and for the County and State aforesaid, on this day personally appeared Doug Rosencrans and Steven R. Seldowitz, Vice President and Assistant Secretary, respectively, of 7-Eleven, Inc., known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that the same was the act of the said corporation, a Texas corporation, and that they executed the same as the act of such corporation for the purposes and consideration therein expressed and in the capacities therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 10th day of January, 2012.

NOTARY PUBLIC

My Commission Expires:

5-1.2013

ATTACHMENT I

Such permits, reports, applications and other documentation issued by any federal, state or local governmental authority and such other standard form documentation provided by 7-Eleven or third parties to be completed in connection with Agent's performance of environmental consulting services pursuant to the Agreement, including, without limitation, the following:

- a. Waste Manifests;
- b. Waste Characterization Forms;
- c. Bills of Lading;
- d. Waste Disposal Agreements;
- e. Registration and Notification Forms for underground storage tanks;
- f. Incident Reports;
- g. Discharge Notification Forms;
- h. Tank Closure Reports;
- i. Permit Applications, Notices and other documents relating to the investigation, monitoring or remediation work performed under the Agreement;
- j. Reports to state environmental agencies regarding investigation, monitoring or remediation work performed under the Agreement; and
- k. Applications to any state underground storage tank insurance or reimbursement fund;

<u>Provided</u>, however, that in each case, the foregoing authorization shall not extend to any permits, reports, applications or other documentation that contain: (i) any language, the effect of which is to require 7-Eleven to indemnify, defend and/or hold harmless any third party for any act or omission of any kind; or (ii) any statement of any kind, including, without limitation, any representation or warranty, which Agent does not personally know to be true and correct, including, without limitation, any representation concerning the legal existence or financial condition of 7-Eleven.

Stantec Consulting Services Inc.



3017 Kilgore Road, Suite 100 Rancho Cordova, CA 95670 (916) 861-0400 (916) 861-0430

Quarterly Groundwater Monitoring Report Fourth Quarter 2013

7-Eleven Store #32266 1339 North Vasco Road Livermore, California

Stantec Project No.: 185750084.300.0506

Submitted to:

Mr. Jerry Wickham Alameda County Environmental Health Services Environmental Protection 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Prepared on behalf of:

7-Eleven, Inc. Mr. Jose Rios P.O. Box 711 Dallas, TX 75221-0711

December 20, 2013

Stantec Consulting Services Inc.



3017 Kilgore Road, Suite 100 Rancho Cordova, CA 95670 (916) 861-0400 (916) 861-0430

DATE: December 20, 2013

7-ELEVEN, INC. QUARTERLY REPORT

Store Number:	7-Eleven Store #32266
Site Address:	1339 North Vasco Road, Livermore, CA 94551
7-Eleven Contact:	Mr. Jose Rios
Consulting Company:	Stantec Consulting Services Inc. – Ms. Amanda Magee
Stantec Project No.:	185750084.300.0506
Primary Agency:	Alameda County Environmental Health Services (ACEHS)

WORK PERFORMED THIS PERIOD [Fourth Quarter 2013]

1. Conducted quarterly groundwater monitoring and sampling on October 30, 2013, and generated the quarterly report.

WORK PROPOSED FOR NEXT PERIOD [First Quarter 2014]

1. Perform quarterly groundwater monitoring and sampling during first quarter of 2014, and prepare the quarterly report.

DISCUSSION

The site is an active 7-Eleven convenience store and retail gasoline fueling facility with one 15,000-gallon gasoline underground storage tank (UST) and one 10,000-gallon gasoline UST (Figures 1 and 2). Current groundwater monitoring and sampling data are summarized in Table 1 and presented on Figures 2 and 3. Historical groundwater monitoring and sampling results are summarized in Table 2. The well completion details are summarized in Table 3. A groundwater gradient and flow direction diagram is presented as Figure 4 and summarized in Table 4.

Site Information

Current Phase of Project:	Groundwater Monitoring
Frequency of Monitoring and Sampling:	Quarterly, Five wells- MW-1 through MW-5
Are Liquid Phase Hydrocarbons Present On-site:	No
Water Supply Wells within a 2,000-foot radius and their Respective Direction:	Three municipal water supply wells (see Stantec work plan and results survey September, 2010)
Current Remediation Techniques:	None
Permits for Discharge:	None
Historic Range in Depth to Water (Measured Below Top of Casing):	MW-1, 7.88 to 8.51 feet



December 20, 2013 7-Eleven Store #32266, 1339 North Vasco Road, Livermore, California Page 2 of 6

Reference: Quarterly Groundwater Monitoring Report, Fourth Quarter 2013

Current Quarter Monitoring Data	(See Figure 2 and Table 1)
Wells Monitored and Sampled:	Five wells - MW-1 through MW-5
Dissolved Oxygen Concentrations Measured In:	Five wells - MW-1 through MW-5
Depth to Groundwater (DTW) (Measured Below Top of Casing):	8.36 to 9.47 feet
Average Change in Groundwater Elevation Since Last Event:	o.o8 foot increase
Groundwater Flow Direction and Gradient:	West-southwest @ 0.006 foot per foot (Figure 2)
Current Quarter Analytical Data	(See Figure 3 and Table 1)
Maximum TPHg Concentrations:	Not Detected, <50 to $<90~\mu g/L$
Maximum Benzene Concentrations:	Not Detected, <0.50 to <0.90 $\mu g/L$
Maximum MtBE Concentrations:	MW-3, 410 μg/L
Maximum TBA Concentrations:	MW-3, 12 μg/L

BACKGROUND

In January 2005, two single-walled steel, fiberglass-jacketed USTs (one 10,000-gallon and one 15,000-gallon) were replaced with new double-walled fiberglass USTs. A total of 27 soil samples were collected during the UST replacement activities as follows:

- Five soil samples from the UST excavation,
- Six soil samples from the beneath the product dispensers,
- Five soil samples from the product line trenches,
- Eleven samples (44 samples combined at laboratory for 11 four-part composite samples) from the stockpiled UST backfill material.

Total petroleum hydrocarbons as gasoline (TPHg) were not detected above laboratory reporting limits in any of the soil samples collected during the UST replacement activities. The maximum concentrations of tert-butyl alcohol (TBA) and methyl tertiary butyl ether (MtBE) detected were 2.6 milligrams per kilogram (mg/kg) and 2.4 mg/kg, respectively, in UST excavation sample T1-2-12. Total lead was detected in each of the samples at concentrations ranging from 4.98 mg/kg to 28.4 mg/kg.

In addition, a total of three water samples were collected during the 2005 UST replacement activities as follows:

- One grab sample (W1) from water collected/pooled within the excavated UST basin,
- Two samples (BT-1 and BT-2) collected from 20,000-gallon Baker Tanks storing pumped UST excavation water.

MtBE was detected at 180 micrograms per liter (μ g/L) and benzene was reported at 25 μ g/L in UST excavation water sample W1 (Table 2). TPHg was detected at 3,400 μ g/L in UST excavation water sample W1. TPHg was not detected in either Baker Tank sample (BT-1 or BT-2). Total xylenes were reported in sample



December 20, 2013 7-Eleven Store #32266, 1339 North Vasco Road, Livermore, California Page 3 of 6

Reference: Quarterly Groundwater Monitoring Report, Fourth Quarter 2013

BT-1 at 0.70 μ g/L. MtBE was detected in both samples at concentrations of 340 μ g/L (BT-1) and 400 μ g/L (BT-2). Based on the results of the water samples collected, a UST Unauthorized Release report was completed and submitted to the Livermore-Pleasanton Fire Department (LPFD) and the California Regional Water Quality Control Board (CRWQCB).

On December 4, 2008, a Stantec Consulting Corporation (now Stantec Consulting Services Inc. [Stantec]) field scientist collected soil samples in native soil from beneath four of the six dispensers (D1-5.0, D2-5.0, D3-5.0, and D4-5.0) during fuel system upgrade activities at the site. In addition, Stantec collected four soil samples from stockpiled excavated backfill material. The four stockpile samples were combined at the laboratory for one four-part composite sample SP1(ABCD). TPHg, benzene, toluene, ethyl benzene and total xylenes (BTEX) were not detected above laboratory reporting limits in the dispenser soil samples collected, with the exception of dispenser sample D2-5.0. Soil sample D2-5.0 contained 0.21 mg/kg benzene, 0.59 mg/kg toluene, 0.26 mg/kg ethyl benzene, 1.4 mg/kg xylenes, and 12 mg/kg TPHg. MtBE and TBA were detected exclusively in soil sample D1-5.0 at concentrations of 0.024 mg/kg and 0.0076 mg/kg, respectively. Di-isopropyl ether (DIPE), ethyl tert-butyl ether (EtBE), and tertiary-amyl methyl ether (TAME) were not detected above laboratory reporting limits in any dispenser soil samples collected. BTEX, TPHg, MtBE, TBA, DIPE, ETBE, and TAME were not detected at concentrations above laboratory reporting limits in the stockpiled soil sample collected during this investigation. Total lead was detected at a concentration of 4.4 mg/kg.

In a letter dated November 20, 2009, the ACEHS requested the submittal of a work plan to investigate potential soil and groundwater contamination at the site based on ACEHS' review of the historical site data. Stantec submitted a *Work Plan for Additional Soil and Groundwater Assessment* to the ACEHS on February 1, 2010. The work plan was subsequently approved by the ACEHS in a letter dated March 22, 2010.

On April 20, 2010, Stantec supervised WDC Exploration and Wells (WDC) of Richmond, California, during the advancement of three direct-push soil borings (GP-1 through GP-3) at the site. Eight soil samples were collected from soil borings GP-1 through GP-3 for laboratory analysis. MtBE was reported in soil boring GP-3 at 10 and 15 feet below ground surface (bgs) at concentrations of 0.023 mg/kg and 1.1 mg/kg, respectively. TBA was exclusively detected in soil boring GP-3 at 15 feet bgs at a concentration of 0.0076 mg/kg. TPHg, BTEX, DIPE, EtBE, and TAME were not detected at concentrations above the laboratory reporting limits in soil samples collected from soil borings GP-1 through GP-3. In addition, grab-groundwater samples were collected from each boring. Grab-groundwater samples GP-2W and GP-3W reported MtBE concentrations of 2.9 μ g/L and 380 μ g/L, respectively. TAME was exclusively detected in grab-groundwater sample GP-3W at a concentration of 0.71 μ g/L. TPHg, BTEX, DIPE, EtBE, and TBA were not detected at concentrations above the laboratory reporting limits in grab-groundwater samples GP-1 through GP-3.

On May 17, 2010, Stantec submitted the results of the assessment activities to the ACEHS in a report titled *Additional Soil and Groundwater Assessment*.

In a letter dated July 14, 2010, the ACEHS requested the submittal of a work plan to further assess the extent of soil and groundwater contamination, the hydraulic gradient, and to identify potential receptors within a radius of 2,000 feet of the subject site.

On September 29, 2010, Stantec submitted a *Work Plan for Additional Site Assessment and Results of Detailed Well Survey* to the ACEHS. The work plan was subsequently approved by the ACEHS in a letter dated October 25, 2010.



December 20, 2013 7-Eleven Store #32266, 1339 North Vasco Road, Livermore, California Page 4 of 6

Reference: Quarterly Groundwater Monitoring Report, Fourth Quarter 2013

Between February 23 and 24, 2010, Stantec supervised the installation of three groundwater monitoring wells (MW-1, MW-2, and MW-3). On March 25, 2011, Stantec submitted an *Additional Site Assessment Report* to the ACEHS. Soil samples collected from borings MW-1 and MW-2 did not contain petroleum hydrocarbon concentrations above laboratory reporting limits. MtBE and TBA were reported at concentrations ranging from 0.0082 mg/kg to 0.33 mg/kg in soil samples collected from boring MW-3.

In a letter dated August 29, 2011, the ACEHS requested the submittal of a work plan for plume delineation to assess whether the plume extends to the water supply of the two wells located approximately 300 feet west of the site. On October 25, 2011, Stantec submitted the *Work Plan for Additional Assessment*. In a letter dated November 21, 2012, the ACEHS requested a revised work plan to address their technical comments. The *Revised Work Plan for Additional Assessment* was submitted on March 5, 2012. The revised work plan was approved by the ACEHS on March 26, 2012.

Between July 10 and 12, 2012, Stantec supervised the advancement of four direct push soil borings (GP-4 through GP-7). On July 20, 2012, Stantec submitted an *Additional Site Assessment Report* to the ACEHS. BTEX and TPHg were not detected above laboratory reporting limits in any of the submitted soil samples; MtBE was detected solely in soil samples collected from soil boring GP-5 with a maximum concentration of 0.056 mg/kg. TPHg and MtBE were detected in grab groundwater samples collected from soil boring GP-4 and GP-5 at maximum concentrations of 95 μg/L and 350 μg/L, respectively.

In an email dated July 24, 2012, the ACEHS approved the locations of proposed monitoring wells MW-4 and MW-5 as proposed in Stantec's July 20, 2012 *Additional Site Assessment Report*. Between September 4 and 7, 2012, Stantec supervised the installation of one offsite groundwater monitoring well (MW-4). Proposed groundwater monitoring well MW-5 was not installed at that time due to the presence of marked and unmarked utilities in the permitted area of the City of Livermore right-of-way. On October 5, 2012, Stantec submitted an *Additional Site Assessment Report*.

In a letter dated November 6, 2012, the ACEHS requested the submittal of work plan for the installation of monitoring well MW-5 after the first quarter 2013 groundwater monitoring and sampling event. On April 4, 2013, Stantec submitted a *Work Plan for Monitoring Well Installation*, which was conditionally approved by the ACEHS on April 22, 2013.

On June 17 and 18, 2013, Stantec supervised as National Exploration Wells and Pumps (National) of Richmond, California, installed groundwater monitoring well MW-5, and on July 18, 2013, Stantec submitted the *Additional Site Assessment Report* to the ACEHS. Soil samples collected during the advancement of MW-5 did not contain hydrocarbon concentration above laboratory reporting limits. In a letter dated August 19, 2013, the ACEHS requested that MW-5 be included in the quarterly groundwater monitoring schedule, and requested analysis of ethylene dibromide (EDB) and 1,2-dichloroethane (1,2 DCA) during the next sampling event. These analyses were conducted during the third quarter 2013 sampling event. EDB and 1,2 DCA were not detected at concentrations above laboratory reporting limits; as such, groundwater analyses for EDB and 1,2 DCA were discontinued, per the ACEHS August 19, 2013 letter.

MONITORING AND SAMPLING PROCEDURES

The depth to water was measured to within 0.01 foot bgs in monitoring wells MW-1 through MW-5 from the top of casing (TOC) using a water level indicator. Dissolved oxygen concentrations were also measured in the wells using a YSI Model Pro20 dissolved oxygen meter equipped with a down hole sensor.



December 20, 2013 7-Eleven Store #32266, 1339 North Vasco Road, Livermore, California Page 5 of 6

Reference: Quarterly Groundwater Monitoring Report, Fourth Quarter 2013

Well purging and sampling equipment was thoroughly cleaned prior to purging and sampling the well. The sampling procedure for the wells included measuring the water level and purging of approximately three casing volumes of water (or to dryness). The equipment and purging methods used for the current sampling event are noted on the field data sheets in Attachment A. During purging, temperature, pH, and electrical conductivity were monitored. After purging, the water level was allowed to recover to 80% of the original level prior to collection of the water sample. Groundwater samples were collected using a disposable Teflon® bailer, placed into appropriate Environmental Protection Agency (EPA) approved containers, labeled, logged onto chain-of-custody (COC) documents, and transported on ice to a California state-certified laboratory. Copies of the field notes are in Attachment A.

GROUNDWATER SAMPLE ANALYSES AND RESULTS

The groundwater samples collected from MW-1 through MW-5 were analyzed for the presence of BTEX, TPHg, MtBE, TBA, DIPE, EtBE, and TAME by EPA Method 8260B. The certified laboratory analytical report and COC documentation are presented as Attachment B.

MtBE concentrations were not reported above laboratory reporting limits in groundwater samples collected, with the exception of MW-3 and MW-4 at concentrations of 410 μ g/L and 58 μ g/L, respectively. All other constituents of concern were not reported above laboratory reporting limits, with the exception of TBA, which was reported at a concentration of 12 μ g/L in the groundwater sample collected from MW-3.

MtBE concentrations in groundwater samples collected from monitoring wells MW-3 and MW-4 continue to show a decreasing trend. In addition, based on the absence of detected MtBE in groundwater samples collected from monitoring well MW-5, the downgradient extent of the dissolved MtBE plume appears to be defined. Based on the foregoing, a stable and declining plume appears to be in progress.

Groundwater analytical results are presented on Figure 3, and are summarized in Tables 1 and 2.

PURGE AND RINSATE WATER DISPOSAL

Water generated during well purging, sampling and equipment cleaning was pumped into a Stantec truck-mounted water tank. The water was transferred into properly labeled 55-gallon drums and stored on-site. The drummed non-hazardous petroleum hydrocarbon contaminated water is removed from the site by Belshire Environmental (Belshire) within approximately three weeks after generation. Belshire then transports the water to DeMenno Kerdoon in Compton, California, for disposal.

The results of this quarterly groundwater monitoring report will be uploaded to the ACEHS' FTP site. In addition, the report will be uploaded to the State of California GeoTracker database in EDF format, per California code AB2886.

LIMITATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of 7-Eleven, Inc., for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information.



December 20, 2013 7-Eleven Store #32266, 1339 North Vasco Road, Livermore, California Page 6 of 6

Reference: Quarterly Groundwater Monitoring Report, Fourth Quarter 2013

The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

If you have any questions or comments regarding the contents of this report, please contact the undersigned at (916) 861-0400.

Sincerely,

Stantec Consulting Services Inc.

Prepared by:

Environmental Technician

Reviewed by:

Amanda Magee, P.G

Associate Geologist

ATTACHMENTS

Figures Tables

Attachment A - Field Notes

Attachment B - Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

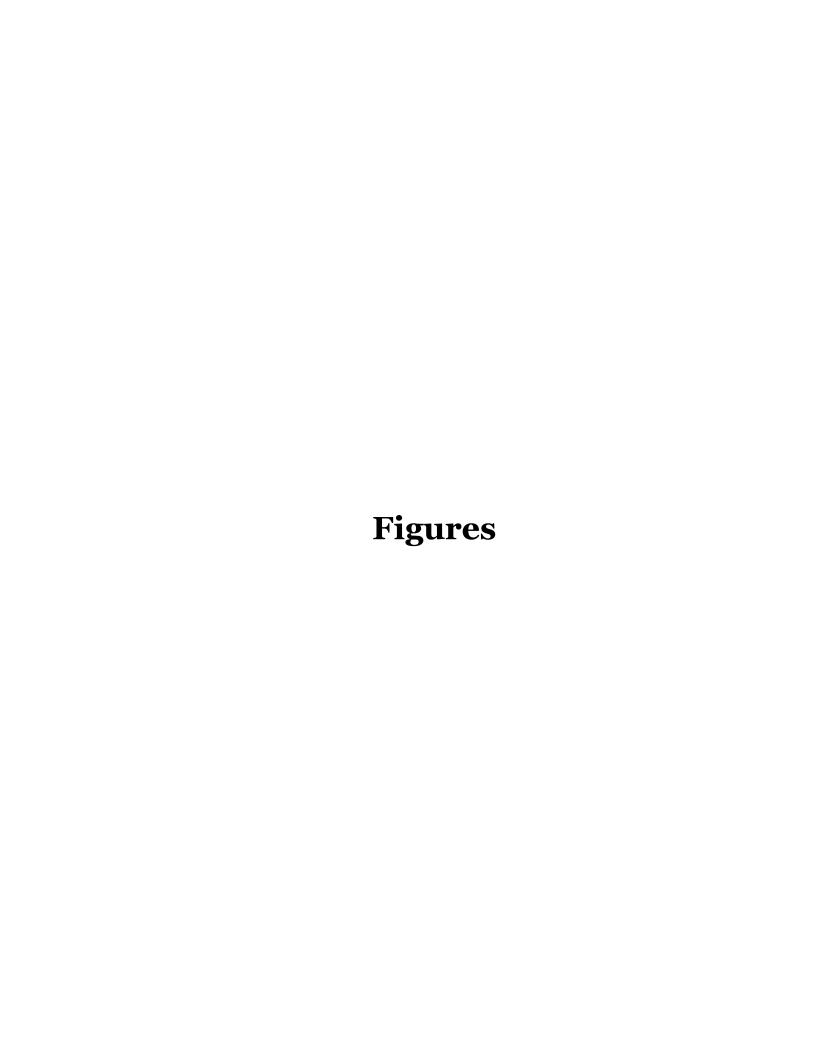
Mr. Jose Rios, 7-Eleven, Inc. c/o Mr. John Wainwright, Stantec, Utah

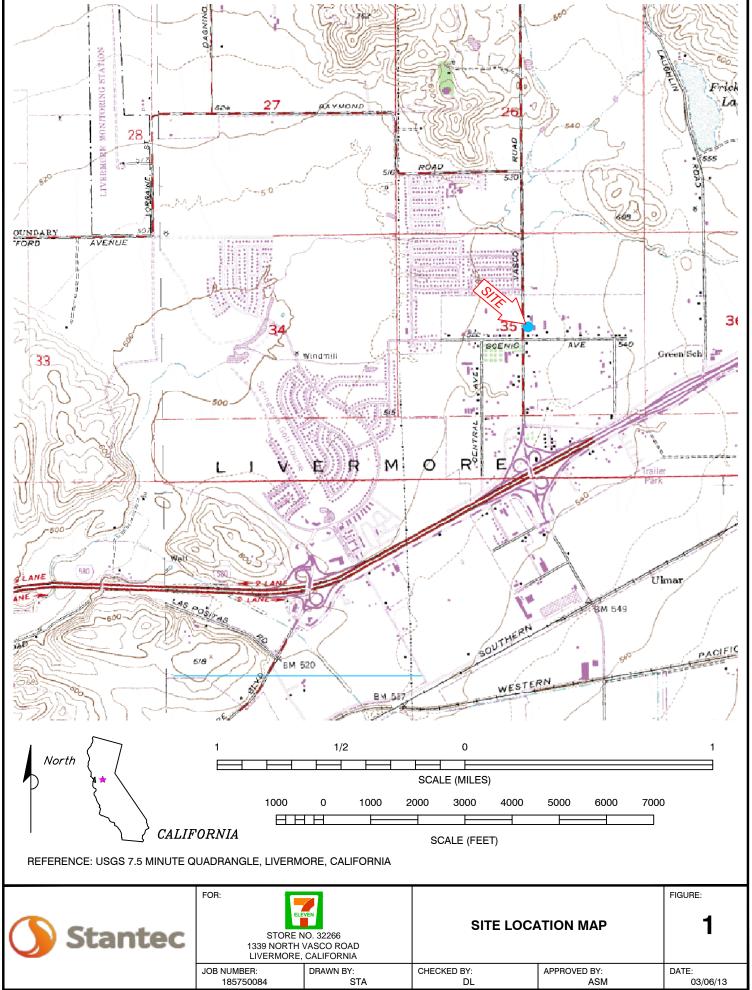
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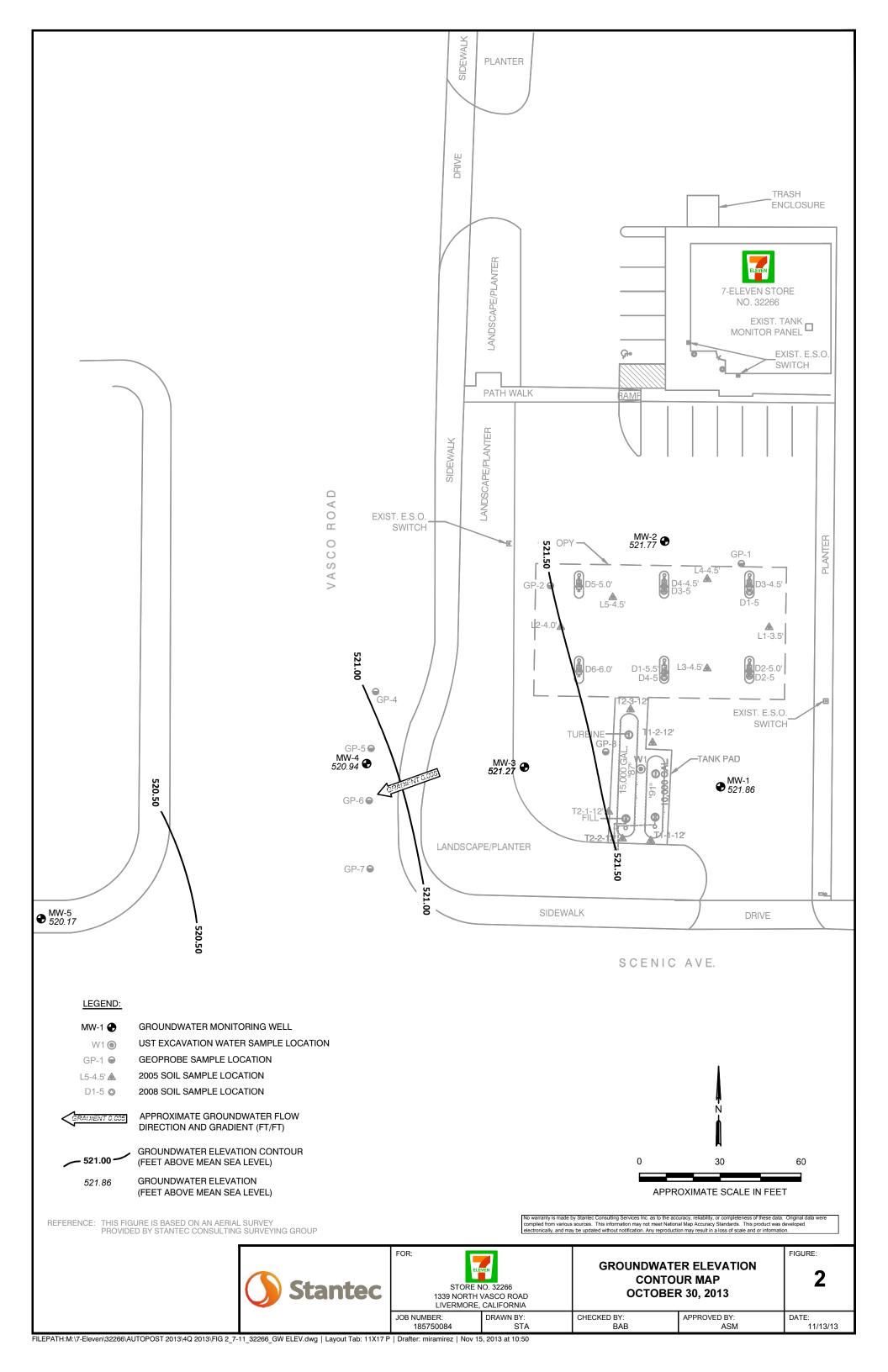
AMANDA MAGEE

Reviewed by:

Danielle Manning Associate Scientist Project Manager







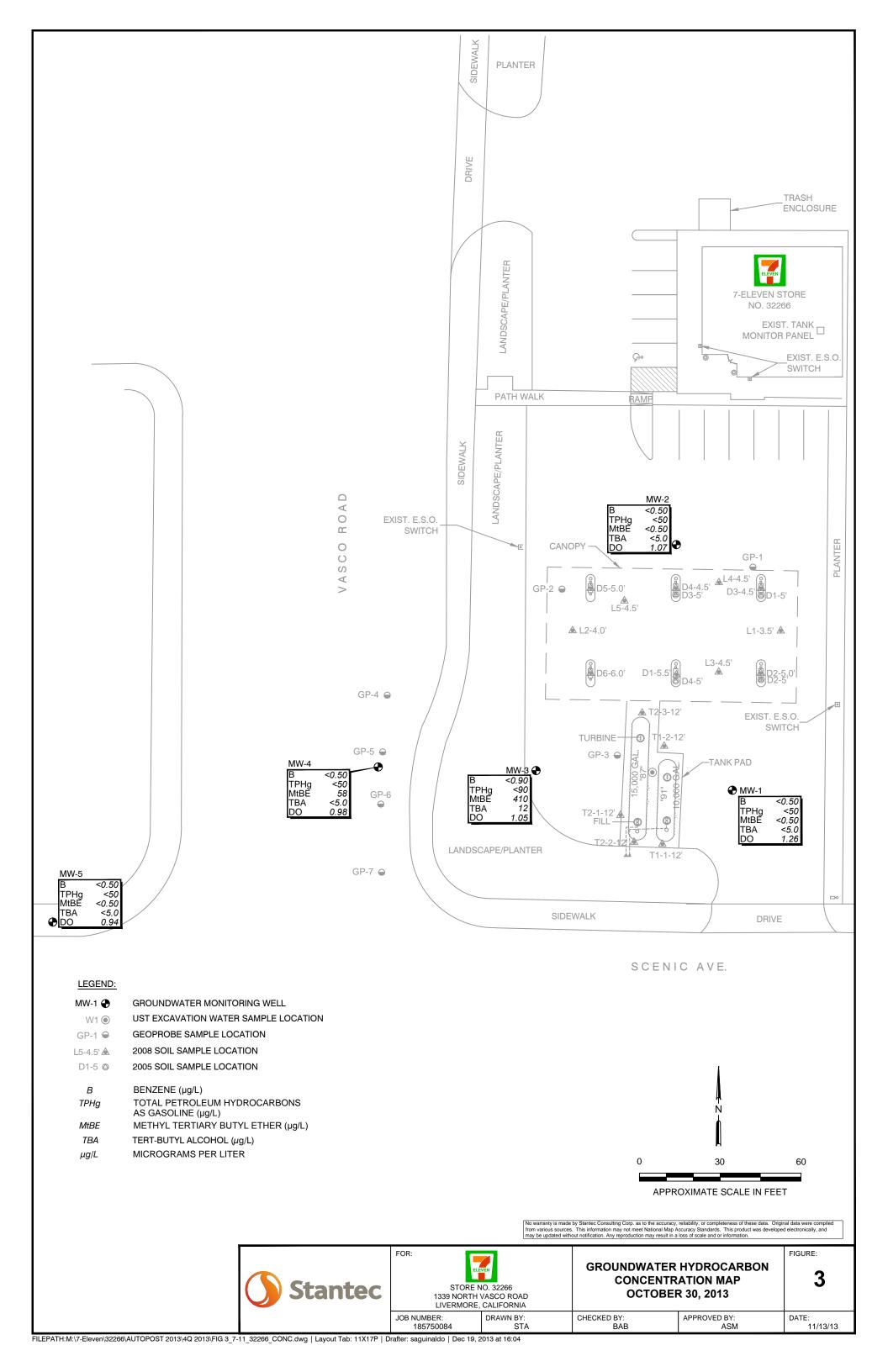
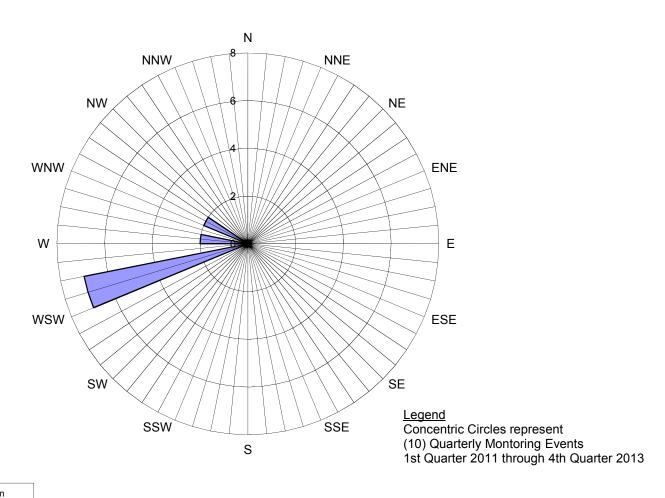


Figure 4
Groundwater Flow Direction Rose Diagram
7-Eleven #32266
1339 North Vasco Road, Livermore, California



■Groundwater Flow Direction

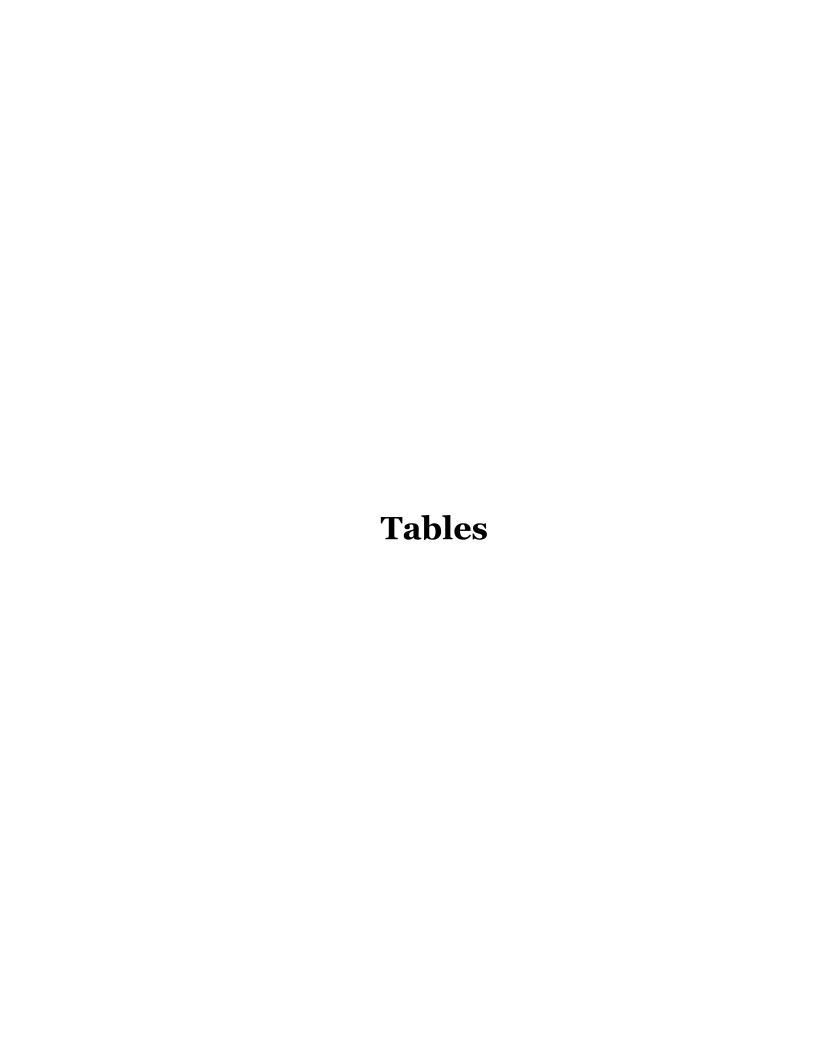


TABLE 1 Fourth Quarter 2013 Groundwater Monitoring and Analytical Data

7-Eleven Store #32266 1339 North Vasco Road Livermore, California

Well ID/ Elevation (TOC)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (μg/L)	TPHg (µg/L)	MtBE (μg/L)	TBA (μg/L)	DIPE (μg/L)	EtBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
MW-1	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0		1.26	8.36	0.00	521.86
530.22																	
MW-2	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0		1.07	8.78	0.00	521.77
530.55																	
MW-3	10/30/13	<0.90	<0.90	<0.90	<0.90	<90	410	12	<0.90	<0.90	<0.90	<9.0	b	1.05	9.47	0.00	521.27
530.74																	
MW-4	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	58	<5.0	<0.50	<0.50	<0.50	<5.0		0.98	8.99	0.00	520.94
529.93																	
MW-5	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0		0.94	9.10	0.00	520.17
529.27																	

Explanation:

BTEX, TPHg, MtBE, DIPE, ETBE, TAME, and TBA by 8260B

TPHg = Total petroleum hydrocarbons as gasoline

MtBE = Methyl tertiary butyl ether

DIPE = Diisopropyl ether

EtBE = Ethyl tert-butyl ether
TAME = Tertiary-amyl methyl ether

TBA = Tert-butyl alcohol

TOC = Top of casing elevation in feet above mean sea level

ug/L = micrograms per Liter or parts-per-billion

mg/L = milligrams per liter

< = Not detected above laboratory reporting limit

Notes

b = Tert-Butanol (Tert-butyl alcohol) results may be biased slightly high. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. Kiff considers this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in rations of over 20:1.

TABLE 2
Historical Water and/or Groundwater Sample Analytical Results

7-Eleven Store #32266 1339 North Vasco Road Livermore, California

Sample				Ethyl	Total												Dissolved			
I.D.	Date	Benzene	Toluene	Benzene	Xylenes	TPHq	MtBE	ТВА	DIPE	EtBE	TAME	Methanol	Ethanol	1,2-DCA	EDB	Notes	Oxygen	DTW	SPT	WTE
(TOC)	Duto	(µg/L)	(μg/L)	(μg/L)	μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ug/L)	(µg/L)	(μg/L)	(µg/L)	110100	(mg/L)	(feet)	(feet)	(feet)
_ , _ ,	vation Grou			(1-3)	(1-3)	(1-37	(1-3)	(1-37	(1-3)	(1-3)	(F3-7	(-8/-/	(F3·-/	(1-3)	(1-3)		(9/2)	(icot)	(1001)	(1001)
W1	01/28/05	25	290	62	520	3,400	180	15	<1.5	<1.5	<1.5	<1.5	<1.5	2,600	2,600					
Baker Tan	k Samples					,	ı						I	,	,	ı			ı	ı
BT-1	02/04/05	<0.50	<0.50	<0.50	0.70	<50	340													
BT-2	02/04/05	<0.90	<0.90	<0.90	<0.90	<90	400													
Grab Grou	ındwater S	amples																		
GP-1W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50									
GP-2W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	2.9	<5.0	<0.50	<0.50	<0.50				-					-
GP-3W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	380	<5.0	<0.50	<0.50	0.71									
GP-4W	07/10/12	<0.50	<0.50	<0.50	<0.50	75	13									С				
GP-5W	07/11/12	<0.50	<0.50	<0.50	<0.50	95	350													
GP-7W	07/12/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50													
	g Well Sam	ples																		
MW-1																				
530.22	03/16/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						2.04	8.07	0.00	522.15
il l	05/26/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50					а	0.35	7.88	0.00	522.34
il l	08/09/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50					а	0.71	8.30	0.00	521.92
il l	10/17/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.5	8.27	0.00	521.95
il	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50					а	0.8	8.51	0.00	521.71
il l	04/05/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.44	8.22	0.00	522.00
il	07/24/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.28	8.36	0.00	521.86
il l	09/21/12																	8.40	0.00	521.82
il l	10/25/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.73	8.46	0.00	521.76
il l	01/16/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.92	8.34	0.00	521.88
il l	04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						1.08	8.28	0.00	521.94
il l	07/18/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		<5.0	<0.50	<0.50		0.76	8.46	0.00	521.76
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		<5.0				1.26	8.36	0.00	521.86
MW-2																				
530.55	03/16/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						1.63	8.31	0.00	522.24
330.33	05/16/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.46	8.37	0.00	522.24
	08/09/11	<0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<50 <50	<0.50	<5.0 <5.0	<0.50	<0.50	<0.50					_	0.46	8.82	0.00	521.73
	10/17/11	<0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<50 <50	<0.50	<5.0 <5.0	<0.50	<0.50	<0.50					а	1.2	o.o∠ 8.74	0.00	521.73
	01/20/12	<0.50	<0.50	<0.50	<0.50	<50 <50	<0.50	<5.0 <5.0	<0.50	<0.50	<0.50					а	0.7	8.96	0.00	521.51
	04/05/12	<0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<50 <50	<0.50	<5.0 <5.0	<0.50	<0.50	<0.50					a	0.7	8.88	0.00	521.59
																		o.oo 9.04		521.67
	07/24/12 09/21/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.30		0.00	
		 -0.50	 -0.50	 -0.50	 -0.50	 -50	 -0.50	 -5 0	 -0.50	 -0.50	 -0.50						 0.76	8.83	0.00	521.72
	10/25/12	<0.50	< 0.50	<0.50	< 0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50						0.76	8.74	0.00	521.81
	01/16/13	<0.50	< 0.50	<0.50	< 0.50	<50	<0.50	<5.0	<0.50	< 0.50	<0.50						0.78	8.71	0.00	521.84
	04/11/13	<0.50	< 0.50	<0.50	< 0.50	<50	<0.50	<5.0	<0.50	< 0.50	<0.50						1.04	8.78	0.00	521.77
	07/18/13	<0.50	< 0.50	<0.50	< 0.50	<50	<0.50	<5.0	<0.50	< 0.50	<0.50		<5.0	<0.50	<0.50		0.94	8.86	0.00	521.69
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		<5.0				1.07	8.78	0.00	521.77

TABLE 2 Historical Water and/or Groundwater Sample Analytical Results

7-Eleven Store #32266 1339 North Vasco Road Livermore, California

Sample				Ethyl	Total												Dissolved			
I.D.	Date	Benzene	Toluene	Benzene	Xylenes	TPHg	MtBE	TBA	DIPE	EtBE	TAME	Methanol	Ethanol	1,2-DCA	EDB	Notes	Oxygen	DTW	SPT	WTE
(TOC)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ug/L)	(µg/L)	(µg/L)	(µg/L)		(mg/L)	(feet)	(feet)	(feet)
MW-3																				
530.74	03/16/11	<0.50	<0.50	< 0.50	<0.50	<50	5,600	170	<0.50	<0.50	10						2.54	9.11	0.00	521.63
	05/26/11	<0.50	<0.50	<0.50	<0.50	<50	3,200	180	<0.50	<0.50	5.4						0.32	9.15	0.00	521.59
	08/09/11	<0.50	<0.50	<0.50	<0.50	<50	1,700	78	<0.50	<0.50	2.8						0.42	9.36	0.00	521.38
	10/17/11	<0.50	<0.50	<0.50	<0.50	<50	1,900	85	<0.50	<0.50	2.9					b	0.6	9.37	0.00	521.37
	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	1,100	58	<0.50	<0.50	2.2						0.5	9.57	0.00	521.17
	04/05/12	<2.5	<2.5	<2.5	<2.5	<250	2,000	57	<2.5	<2.5	3.3					b	0.47	9.44	0.00	521.30
	07/24/12	<0.50	<0.50	<0.50	<0.50	<50	2,000	50	<0.50	<0.50	3.9					b	0.36	9.65	0.00	521.09
	09/21/12	<1.5	<1.5	<1.5	<1.5	<150	760	32	<1.5	<1.5	1.5					b		9.55	0.00	521.19
	10/25/12	<1.5	<1.5	<1.5	<1.5	<150	670	25	<1.5	<1.5	<1.5					b	0.75	9.50	0.00	521.24
	01/16/13	<1.5	<1.5	<1.5	<1.5	<150	1,200	30	<1.5	<1.5	2.4					b	0.73	9.23	0.00	521.51
	04/11/13	<2.5	<2.5	<2.5	<2.5	<250	1,700	27	<2.5	<2.5	<2.5					b	0.81	9.44	0.00	521.30
	07/18/13	<1.5	<1.5	<1.5	<1.5	<150	880	15	<1.5	<1.5	1.7		<15	<1.5	<1.5	b	0.82	9.61	0.00	521.13
	10/30/13	<0.90	<0.90	<0.90	<0.90	<90	410	12	<0.90	<0.90	<0.90		<9.0			b	1.05	9.47	0.00	521.27
MW-4																				<u> </u>
529.93	09/21/12	<0.50	<0.50	<0.50	<0.50	<50	400	<5.0	<0.50	<0.50	0.69							9.01	0.00	520.92
329.93	10/25/12	<0.50	<0.50	<0.50	<0.50	<50	270	<5.0	<0.50	<0.50	<0.50						0.79	9.01	0.00	520.92
	01/16/13	<0.50	<0.50	<0.50	<0.50	<50	47	<5.0	<0.50	<0.50	<0.50						0.73	8.86	0.00	520.92
	04/11/13	<0.50	<0.50	<0.50	<0.50	<50	290	<5.0	<0.50	<0.50	<0.50						1.07	8.80	0.00	521.13
	07/18/13	<0.50	<0.50	<0.50	< 0.50	<50	150	<5.0	<0.50	<0.50	<0.50		<5.0	<0.50	<0.50		1.20	9.02	0.00	520.91
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	58	<5.0	<0.50	<0.50	<0.50		<5.0		~ 0.50		0.98	8.99	0.00	520.91
	10/30/13	٧٥.٥٥	٠٥.٥٥	٧٥.٥٥	٠٥.٥٥	430	30	١٥.٥	10.00	٧٥.٥٥	٧٥.٥٥		10.0				0.50	0.55	0.00	320.54
MW-5																				
529.27	07/18/13	<0.50	<0.50	<0.50	< 0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		<5.0	<0.50	<0.50		1.94	9.13	0.00	520.14
	10/30/13	<0.50	< 0.50	<0.50	< 0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		<5.0				0.94	9.10	0.00	520.17

Explanation:

BTEX, TPHg, MtBE, DIPE, ETBE, TAME, and TBA by 8260B

TPHg = Total petroleum hydrocarbons as gasoline

MtBE = Methyl tertiary butyl ether

DIPE = Diisopropyl ether

EtBE = Ethyl tert-butyl ether

TAME = Tertiary-amyl methyl ether

TBA = Tert-butyl alcohol

EDB = 1,2 Dibromoethane

EDC = 1,2 Dichloroethane

EtOH = Ethanol

TOC = Top of casing elevation in feet above mean sea level

UST = Underground Storage Tank

ug/L = micrograms per Liter or parts-per-billion mg/L = milligrams per liter

< = Not detected above laboratory reporting limit

-- = Not sampled/not measured

Notes

a = Matrix Spike/Matrix Spike Duplicate for the analyte MtBE were affected by the analyte concentrations already present in the un-spike sample.

b = Tert-Butanol (Tert-butyl alcohol) results may be biased slightly high. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. that contain MtBE/Tert-Butanol in rations of over 20:1.

c = Analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4 inch in diameter.

Table 3 **Soil Boring Details**

7-Eleven Store #32266 1339 North Vasco Road Livermore, California

		Boring	Well	Scr	een	Screen	
Well	Drill	Depth	Diameter	Тор	Bottom	Length	Comments
I.D.	Date	(feet bgs)	(inches)	(feet bgs)	(feet bgs)	(feet)	
Soil Borings	3						
GP-1	04/20/10	20					
GP-2	04/20/10	25			-		
GP-3	04/20/10	30			-		
GP-4	07/10/12	25			-		Off-site soil boring
GP-5	07/10/12	25			-		Off-site soil boring
GP-6	07/11/12	25			-		Off-site soil boring
GP-7	07/12/12	25					Off-site soil boring
Monitoring '	Wells						
MW-1	02/23/11	20	2	5	20	15	
MW-2	02/24/11	20	2	5	20	15	
MW-3	02/23/11	25	2	5	20	15	
MW-4	09/07/12	20	2	5	20	15	Off-site monitoring well
MW-5	06/18/13	20.25	2	5	20	15	Off-site monitoring well

Explanation

bgs = Below ground surface
-- = Data Not Available/Not Applicable

Table 4 Groundwater Gradient and Flow Direction

7-Eleven Store # 32266 1339 North Vasco Road Livermore, California

Well No.	Monitoring	D.T.M	Groundwater							Groun	dwater	Flow Di	rection						
	Date	DTW (ft bgs)	Gradient (feet per foot)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
MW-1	03/16/11	8.07	0.008	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	05/26/11	7.88	0.010	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	08/09/11	8.30	0.008	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	10/17/11	8.27	0.008	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	01/20/12	8.51	0.009	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	04/05/12	8.22	0.010	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	07/24/12	8.36	0.012	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	10/25/12	8.46	0.007	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	04/11/13	8.28	0.005	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	07/18/13	8.46	0.006	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	10/30/13	8.36	0.006	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Avera	age Values	8.29	0.008	0	0	0	0	0	0	0	0	0	0	0	7	2	2	0	0
Minum	um Values	7.88	0.005		·							·			·		·	·	·

Explanation

Maximum Values

TOC = Top of Casing (elevation in feet above mean sea level)

8.51

0.012

DTW = Depth to water below grade surface as measured from TOC

Number of Events 11 Events

Attachment A Field Notes

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	185750084.200.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	10/30/13
	Livermore, California	DATE PREPARED:	10/1/2013
PREPARED FOR:	Brian Branscum	PREPARED BY:	Brian Branscum
	SITE VIS	ITATION REPORT	
Name(s) Brian Br			No.
Arrival Time: 0900	"Departure Time: \2		(Yes) No
Weather Notations:		SNOW	Danielle Manning Temperature 50 - 70's F
Weather Notations.	COOD! ITAIN	SNOW	Temperature 50 - 70'S F
* No	drums need to be	ordered.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	ENVIRONMENTAL:		
Purge Water Soi		ELEVEN'S FACILITY: d/Labeled HAZ	TOTALS: Total Open Top
Concrete/Debris		r:O	Total Bung Top
Other:	Othe	r: <i>O</i>	
Empty	3	Please	take a picture of anything not clearly labeled
**************************************	HEALTH AND	SAFETY ASSESSMENT	
PPE, HASP, Hosi			E KILT K
THE MHOP HOS	sital some venice front water	c, Delivery Trucks, SI	ips Trips Falls, Traffic
Lortrol, Scope	ot work.	<u> </u>	
	DESCRIPTION OF A	CTIVITIES ONSITE AND NOTES	
200			
0630-0900-7	trude inspection, drove to	City Hall. Plu Encroachin	ent Permit chove to site.
0900-0930-1	Net w/Bob (cruz. Bros.) tails	ate meeting, started Pape	mode devar à cal equipment.
930-1025 - B	ob setup traffic control	for well mw-4. (prened then award
	sells mw-1, mw-2 mw-5		7 9
	zened, guaged, purged is san	. 1 . 1	1.1
			Control.
100-1230 - Pu			
1230-1250 - R	deased surge 420 from to	ruck to onsite 55-ga	d. drum.
150-1300 -P	relied up equipment, finge	hed paperwork	
300-1500-T	rove to Airgos, Plu		rove home.
3/			
×			
	- Alakan	***	
	O WINGILL		

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	185750084.200.0700	
SITE ADDRESS:	1339 North Vasco Road	START DATE:	10/30/13	
	Livermore, California	DATE PREPARED:	10/1/2013	
PREPARED FOR:	Brian Branscum	PREPARED BY:	Brian Branscum	
PREPARED FOR:	Brian Branscum	PREPARED BY:	Brian Branscum	

GROUNDWATER GAUGING FORM

MEASURED TO TOC

WELL	CONST.	WELL	WELL	DTB	DTW	DTP/PT	D.O.	TIME	COMMENTS
I.D.	DTB	DIAM.	ELEV.						Please note if well needs
			ТОС				(mg/L)		locking cap or street box repair
MW-1	20	2"		18.89	8.36	NA	1.26	0935	
MW-2	20	2"		19.16	8.18	,	1.07	0940	
MW-5	20	2"		19.49	9.10	1	0.94	0950	
mw-3	20	2"		20.06	9.47	/	1.05	1005	
mw-4	20	2"		19.31	8:99	4	0.98	1035	Traffic Control

		Consulting Corp			
PROJECT #: 7-Eleven Store #32266 CLIENT NAME: 7-Eleven, Inc. LOCATION: 1339 North Vasco Road, Live	PURGED BY: _SAMPLED BY:	Brian Branscum Brian Branscum	WELL SAMPI		. 1
DATE PURGED 10 30 13 DATE SAMPLED 10 30 13 SAMPLE TYPE: Groundwater X	START (2400hr) SAMPLE TIME Surface Wa	(2400hr)	END (2	400hr)ll	16
CASING DIAMETER: 2" X Casing Volume: (gallons per foot) (0.17)	3" (0.38)	4" (0.67) 5" (1.0	2) 6" (1.50)	8" (2.60)	Other ()
DEPTH TO BOTTOM (feet) = 18.80 DEPTH TO WATER (feet) = 8.31 WATER COLUMN HEIGHT (feet) = 10.53	2	CALC	IG VOLUME (gal) = ULATED PURGE (g AL PURGE (gal) =	and a	
	FIELD N	MEASUREMENTS			
DATE TIME (2400hr) (gal) 10 30 13 1110 1.7 1113 3.4 1116 5.1	TEMP. (degrees C) 23.0 23.9 24.3	CONDUCTIVITY (umhos/cm) 2285 2342 2316	pH (units) 6.84 6.98	COLOR (visual) BRN BRN	TURBIDITY (NTU) MED MED MED/LOW
		-			
	SAMPLE	E INFORMATION)
SAMPLE DEPTH TO WATER: 9.4	49		SAMPLE TURB	IDITY:	ED/LOW_
80% RECHARGE: X YES NO	ANAL	YSES: BTEX, TPHg,	Oxygenates (EPA	8260B)	
ODOR: NA SAMPLE V	ESSEL / PRESERVA	TIVE: HCL			
PURGING EQUIPMENT Bladder Pump Bailer (7) Centrifugal Pump Bailer (8) X Submersible Pump Peristalic Pump Dedicate Other: Pump Depth:	PVC) Stainless Steel)	Bladder Pump Centrifugal P Submersible I Peristalic Pum Other:	ump X Bail	ler (Teflon)	C or X disposable)
WELL INTEGRITY: GOOD			LOCK#: YE	3	
REMARKS: D.O 1.26					
1 1. 1					
SIGNATURE: 75 4.75			3.0		Page 1 of 5

Stantec Consulting Corp. WATER SAMPLE FIELD DATA SHEET							
PROJECT #: 7-Eleven Store #32266 PURGED BY: Brian Branscum CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Brian Branscum LOCATION: 1339 North Vasco Road, Livermore, Califor			WELL I.D.: MW- 2 SAMPLE I.D.: MW- Z QA SAMPLES: None				
DATE PURGED 10 30 13 DATE SAMPLED 10 30 13 SAMPLE TYPE: Groundwater X	START (2400hr) SAMPLE TIME Surface Wa	(2400hr)	1140 Treatment Effluer	END (2400	Other	136	
CASING DIAMETER: 2" X Casing Volume: (gallons per foot) (0.17)	3" (0.38)	4" (0.67) 5"	(1.02)	(1.50)	8" (2.60)	Other ()	
DEPTH TO BOTTOM (feet) = 19.16 DEPTH TO WATER (feet) = 8.78 WATER COLUMN HEIGHT (feet) = 10.39		(CASING VOLUN CALCULATED F ACTUAL PURGE	PURGE (gal)	1.7 = <u>5.1</u> 7.0		- -
	FIELD I	MEASUREMENTS	T				_
DATE TIME (2400hr) (gal) 10 30 13 1130 1.7 1133 3.4 1136 5.1	TEMP. (degrees C) 22.7 22.4 22.2	CONDUCTIVIT (umhos/cm) 2636 2697 2699	pH (unit	ts)	COLOR (visual) BRN BRN BRN	TURBIDITY (NTU) MED MED MED	
	SAMPI I	E INFORMATION					\dashv
SAMPLE DEPTH TO WATER: 8.92	————	L IN ORWATION	SAMPI	E TURBIDIT	гү:	ow	
80% RECHARGE: YES NO ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B) ODOR: N SAMPLE VESSEL / PRESERVATIVE: HCL							
Peristalic Pump Dedicated Other: Pump Depth:		Submer	Pump ugal Pump sible Pump ic Pump	ING EQUIPN Bailer (X Bailer Bailer (Dedicat	Teflon) (PVC Stainless Steel	or X disposable))
WELL INTEGRITY: GOOD REMARKS: D.O 1.07 SIGNATURE:			LOCE	K#: YES		age 2 of 5	

		Stantec C	Consulting	g Corp.			
	WAT	ER SAMPI	LE FIELD I	DATA SHI	EET		
PROJECT#: 7-Eleven Store #32266 PURGED BY: Brian Branscum CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Brian Branscum LOCATION: 1339 North Vasco Road, Livermore, Califor			SAMPLI	WELL I.D.: MW- 5 SAMPLE I.D.: MW- 5 QA SAMPLES: None			
DATE PURGED 10 30 13 DATE SAMPLED 10 30 SAMPLE TYPE: Groundw	13 s.	TART (2400hr) AMPLE TIME (Surface Wa	(2400hr)	O \Zo		00hr) \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ol
CASING DIAMETER: Casing Volume: (gallons per foot)	2" <u>X</u> (0.17)	(0.38)	4" (0.67)	5" (1.02)	6" (1.50)	8" (2.60)	Other ()
DEPTH TO BOTTOM (feet) = DEPTH TO WATER (feet) = WATER COLUMN HEIGHT (feet) =	19.49 9.10 10.39			CALCULA	OLUME (gal) = TED PURGE (ga PURGE (gal) =	1.7 1)= 5.1 7.0	
		FIELD N	MEASUREMEN	ITS			
10/30/13 (2400hr) 1155 1158	OLUME (gal) 1.7 3.4 5.	TEMP. (degrees C) 21.6 22.4 22.7	CONDUCTI (umhos/c	m) 8	pH (units) 6.85 6.87	COLOR (visual) BRN BEN	TURBIDITY (NTU) MED MED MED
			8				
SAMPLE DEPTH TO WATER:	9.27	SAMPLE	EINFORMATIO		AMPLE TURBII	DITY: ME	D
80% RECHARGE: X YES NO)	ANAI	YSES: BTEX	. TPHg. 5 Ox	ygenates (EPA 8	260R)	
.10	AMPLE VESSEI				ygennes (21110	2002)	
PURGING EQUIP				SA	AMPLING EQUI	PMENT	
Bladder Pump Centrifugal Pump X Submersible Pump Peristalic Pump Other: Pump Depth:	Bailer (Teflon Bailer (PVC) Bailer (Stainle Dedicated		Cen Subi Peri	dder Pump trifugal Pump mersible Pump stalic Pump	X Baile Baile Dedic	r (Teflon) r (PVC r (Stainless Stee	or X disposable)
WELL INTEGRITY: GOOD REMARKS: D.O 0.94		22			LOCK#: YE	S	
SIGNATURE:	5	- (Page 3 of 5

Stantec Consulting Corp. WATER SAMPLE FIELD DATA SHEET						
PROJECT #: 7-Eleven Store #32266 CLIENT NAME: 7-Eleven, Inc. LOCATION: 1339 North Vasco Road, Livern	PURGED BY: B	rian Branscum	WELL I.D.:	MW- 3 MW- 3 None		
DATE PURGED 10 30 13 DATE SAMPLED 10 30 13 SAMPLE TYPE: Groundwater X	START (2400hr) SAMPLE TIME (240 Surface Water	1215 00hr) Treatment E	END (2400hr)	122 <i>b</i>		
CASING DIAMETER: 2" $\frac{X}{(0.17)}$	3" (0.38)	(0.67) 5" (1.02)	6" (1.50) 8" (2.	Other ()		
DEPTH TO BOTTOM (feet) = 20.00 DEPTH TO WATER (feet) = 9.47 WATER COLUMN HEIGHT (feet) = 10.59	0	CALCULA	OLUME (gal) = $\frac{1.8}{1.8}$ TED PURGE (gal) = $\frac{5}{1.8}$ PURGE (gal) = $\frac{5}{1.8}$.4		
	FIELD MEA	ASUREMENTS		10-00		
DATE TIME (2400hr) (gal) 10 30 13 1220 1.8 1223 3.6 1226 5.4	TEMP. (degrees C) 23.5 23.9 24.4	CONDUCTIVITY (umhos/cm) 1349 1339	pH (COLO) (units) (visual) 6.91 BRN 6.92 BRN	(NTU) med med		
	SAMPLE IN	IFORMATION -				
SAMPLE DEPTH TO WATER: 9.56	10.4511.46		AMPLE TURBIDITY:	MEDILOW		
80% RECHARGE: X YES NO ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B) ODOR: NA SAMPLE VESSEL / PRESERVATIVE: HCL						
PURGING EQUIPMENT Bladder Pump Centrifugal Pump Bailer (Pount of the properties of the properties of the pump and pump	VC) ainless Steel)	SAMPLING EQUIPMENT Bladder Pump Bailer (Teflon) Centrifugal Pump X Bailer (PVC or X disposed Submersible Pump Bailer (Stainless Steel) Peristalic Pump Dedicated Other:				
WELL INTEGRITY: GOOD REMARKS: D.O 1.05		_	LOCK#: YES			
SIGNATURE:	•		A. 100 (100 (100 (100 (100 (100 (100 (100	Page <u>4</u> of <u>5</u>		

Stantec Consulting Corp. WATER SAMPLE FIELD DATA SHEET WELL I.D.: MW- 4 PROJECT #: 7-Eleven Store #32266 PURGED BY: Brian Branscum CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Brian Branscum SAMPLE I.D.: LOCATION: 1339 North Vasco Road, Livermore, Califor QA SAMPLES: 10 30 13 1040 START (2400hr) DATE PURGED END (2400hr) 10/30/13 1055 SAMPLE TIME (2400hr) DATE SAMPLED Treatment Effluent SAMPLE TYPE: Groundwater Surface Water CASING DIAMETER: Casing Volume: (gallons per foot) (0.38)(0.67)(1.02)19.31 DEPTH TO BOTTOM (feet) = CASING VOLUME (gal) = 8,99 DEPTH TO WATER (feet) = CALCULATED PURGE (gal) = WATER COLUMN HEIGHT (feet) = ACTUAL PURGE (gal) = FIELD MEASUREMENTS DATE TIME VOLUME TEMP. CONDUCTIVITY pН COLOR TURBIDITY (2400hr) (degrees C) (umhos/cm) (units) (visual) (NTU) (gal) 1596 BRN 16.8 MED LT. BRW 20.2 1051 SEMI-CUR SAMPLE INFORMATION LOW SAMPLE DEPTH TO WATER: SAMPLE TURBIDITY: X YES NO 80% RECHARGE: ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B) ODOR: SAMPLE VESSEL / PRESERVATIVE: HCL PURGING EQUIPMENT SAMPLING EQUIPMENT Bladder Pump Bailer (Teflon) Bladder Pump Bailer (Teflon) X Bailer (PVC or X disposable) Centrifugal Pump Bailer (PVC) Centrifugal Pump X Submersible Pump Bailer (Stainless Steel) Submersible Pump Bailer (Stainless Steel) Peristalic Pump Dedicated Peristalic Pump Dedicated Other: Other: Pump Depth: WELL INTEGRITY: (200) LOCK#: YES REMARKS: D.O. - 0-98 Page 5 of SIGNATURE:

Attachment B Certified Laboratory Analytical Reports and Chain-of-Custody Documentation



Date: 11/06/2013

Laboratory Results

Danielle Manning Stantec Consulting Services Inc. 3017 Kilgore Road, Suite 100 Rancho Cordova, CA 95670

Subject: 5 Water Samples

Project Name: 7-Eleven Store #32266 Project Number: 185750084.200.0410

Dear Ms. Manning,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC and TNI 2009 standards. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Troy Turpen

Troy D. Turpen



Date: 11/06/2013

Subject: 5 Water Samples
Project Name: 7-Eleven Store #32266
Project Number: 185750084.200.0410

Case Narrative

Tert-Butanol results for sample MW-3 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.



Date: 11/06/2013

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Sample: MW-1 Matrix: Water Lab Number: 86411-01

Sample Date :10/30/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:13
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/13 10:13
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/13 10:13
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/13 10:13
1,2-Dichloroethane-d4 (Surr)	97.6		% Recovery	EPA 8260B	11/04/13 10:13
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	11/04/13 10:13



Date: 11/06/2013

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Sample: MW-2 Matrix: Water Lab Number: 86411-02

Sample Date :10/30/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:15
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/13 10:15
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/13 10:15
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/13 10:15
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	11/04/13 10:15
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	11/04/13 10:15



Date: 11/06/2013

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Sample: MW-3 Matrix: Water Lab Number: 86411-03

Sample Date :10/30/2013

Parameter Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Toluene	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Ethylbenzene	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Total Xylenes	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Methyl-t-butyl ether (MTBE)	410	0.90	ug/L	EPA 8260B	11/05/13 22:17
Diisopropyl ether (DIPE)	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Ethyl-t-butyl ether (ETBE)	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Tert-amyl methyl ether (TAME)	< 0.90	0.90	ug/L	EPA 8260B	11/05/13 22:17
Tert-Butanol	12 J	5.0	ug/L	EPA 8260B	11/05/13 22:17
Ethanol	< 9.0	9.0	ug/L	EPA 8260B	11/05/13 22:17
TPH as Gasoline	< 90	90	ug/L	EPA 8260B	11/05/13 22:17
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	11/05/13 22:17
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	11/05/13 22:17



Date: 11/06/2013

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Sample: MW-4 Matrix: Water Lab Number: 86411-04

Sample Date :10/30/2013

Parameter Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Methyl-t-butyl ether (MTBE)	58	0.50	ug/L	EPA 8260B	11/04/13 10:12
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/13 10:12
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/13 10:12
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/13 10:12
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/13 10:12
1,2-Dichloroethane-d4 (Surr)	99.6		% Recovery	EPA 8260B	11/04/13 10:12
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/04/13 10:12



Date: 11/06/2013

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Sample: MW-5 Matrix: Water Lab Number: 86411-05

Sample Date :10/30/2013

Sample Date :10/30/2013	Manageman	Method		A sa a b sa ba	Data/Time
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/05/13 02:45
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/05/13 02:45
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/05/13 02:45
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/05/13 02:45
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	11/05/13 02:45
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/05/13 02:45

Date: 11/06/2013

QC Report : Method Blank Data

Project Name: **7-Eleven Store #32266**Project Number: **185750084.200.0410**

		Method						Method	t		
	Measured	Reportir		Analysis	Date		Measured	Report		Analysis	Date
<u>Parameter</u>	Value	Limit	Units	Method	<u>Analyzed</u>	<u>Parameter</u>	Value	Limit	Units	Method	Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013	Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/05/2013
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013	Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/05/2013
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/05/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/2013	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/05/2013
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	11/04/2013	1,2-Dichloroethane-d4 (Surr)	98.8		%	EPA 8260B	11/05/2013
Toluene - d8 (Surr)	100		%	EPA 8260B	11/04/2013	Toluene - d8 (Surr)	101		%	EPA 8260B	11/05/2013
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013	Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013	Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013	Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/2013	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/2013
1,2-Dichloroethane-d4 (Surr)	99.9		%	EPA 8260B	11/04/2013	1,2-Dichloroethane-d4 (Surr)	98.9		%	EPA 8260B	11/04/2013
Toluene - d8 (Surr)	101		%	EPA 8260B	11/04/2013	Toluene - d8 (Surr)	101		%	EPA 8260B	11/04/2013

QC Report : Method Blank Data Date : 11/06/2013

Project Name: **7-Eleven Store #32266**Project Number: **185750084.200.0410**

Parameter	Measured Value	Method Reportin Limit	g Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	11/04/2013
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	11/04/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	11/04/2013
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	11/04/2013
Toluene - d8 (Surr)	101		%	EPA 8260B	11/04/2013

		Method			
	Measured	Reportin	ng	Analysis	Date
Parameter	Value	Limit	Units	Method	Analyzed

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Matrix Spike/ Matrix Spike Duplicate

	Spiked	Sampla	Spike	Spike Dup.	Spiked Sample	Duplicate Spike Sample	e ed	Analysis	Date	Spiked Sample	Duplicat Spiked Sample		Spiked Sample Percent	Relative Percent Diff.
Parameter	Sample	Sample Value	Level	Level	Value	Value	Units	Method	Analyzed	Recov.	Percent Recov.	Diff.	Limit	Limit
Benzene														
	86411-02	<0.50	40.0	40.0	42.1	42.0	ug/L	EPA 8260B	11/4/13	105	105	0.118	70.0-130	25
Diisopropyl ethe	er													
	86411-02	<0.50	39.9	39.9	43.6	43.8	ug/L	EPA 8260B	11/4/13	109	110	0.418	70.0-130	25
Ethanol														
	86411-02	<5.0	99.3	99.3	102	103	ug/L	EPA 8260B	11/4/13	102	104	1.24	55.0-150	25
Ethyl-tert-butyl	ether													
	86411-02	<0.50	40.1	40.1	46.9	46.6	ug/L	EPA 8260B	11/4/13	117	116	0.687	70.0-130	25
Ethylbenzene														
	86411-02	<0.50	40.0	40.0	42.6	42.6	ug/L	EPA 8260B	11/4/13	106	106	0.0322	70.0-130	25
Methyl-t-butyl e														
	86411-02	<0.50	39.9	39.9	46.2	46.6	ug/L	EPA 8260B	11/4/13	116	117	0.830	70.0-130	25
P + M Xylene														
T (D ()	86411-02	<0.50	40.0	40.0	43.1	42.5	ug/L	EPA 8260B	11/4/13	108	106	1.54	70.0-130	25
Tert-Butanol														
To ut a second second	86411-02	<5.0	202	202	212	213	ug/L	EPA 8260B	11/4/13	105	106	0.454	70.0-130	25
Tert-amyl-meth	•													
Taluana	86411-02	<0.50	40.3	40.3	46.0	45.3	ug/L	EPA 8260B	11/4/13	114	112	1.60	70.0-130	25
Toluene	00444.60	.0.50	40.0	40.0	40.0	40.0		ED4 0000D	4.4.4.4.6	407	407	0.074	70.0.400	0.5
	86411-02	<0.50	40.0	40.0	42.9	42.8	ug/L	EPA 8260B	11/4/13	107	107	0.371	70.0-130	25

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Matrix Spike/ Matrix Spike Duplicate

	Spiked	Sample	Spike	Spike Dup.	Spiked Sample	Duplicate Spike Sample	e ed	Analysis	Date	Spiked Sample Percent	Duplicat Spiked Sample Percent	Relative	Spiked Sample Percent Recov	Relative Percent Diff.
Parameter	Sample	Value	Level	Level	Value	Value	Units	Method	Analyzed	Recov.	Recov.	Diff.	Limit	Limit
Benzene														
	86411-01	<0.50	40.0	40.0	41.9	41.0	ug/L	EPA 8260B	11/4/13	105	103	1.98	70.0-130	25
Diisopropyl eth														
Ethanol	86411-01	<0.50	39.9	39.9	42.0	41.6	ug/L	EPA 8260B	11/4/13	105	104	0.947	70.0-130	25
Ethanoi	86411-01	<5.0	99.3	99.3	110	106	ug/L	EPA 8260B	11/4/13	110	107	3.11	55.0-150	25
Ethyl-tert-butyl	ether													
	86411-01	<0.50	40.1	40.1	42.8	41.8	ug/L	EPA 8260B	11/4/13	107	104	2.48	70.0-130	25
Ethylbenzene														
	86411-01	<0.50	40.0	40.0	42.8	42.7	ug/L	EPA 8260B	11/4/13	107	107	0.0963	70.0-130	25
Methyl-t-butyl e							_							
D. I. M. Vislama	86411-01	<0.50	39.9	39.9	41.7	41.0	ug/L	EPA 8260B	11/4/13	105	103	1.74	70.0-130	25
P + M Xylene	00444.04	.0.50	40.0	40.0	40.4	40.0	,,	EDA 0000D	44/4/40	101	101	0.050	70.0.400	0.5
Tert-Butanol	86411-01	<0.50	40.0	40.0	40.4	40.3	ug/L	EPA 8260B	11/4/13	101	101	0.250	70.0-130	25
Tert-Butanoi	86411-01	∠ 5.0	202	202	210	210	ua/l	EPA 8260B	11/4/13	104	104	0.470	70.0-130	25
Tert-amyl-meth		~0.0	202	202	210	210	ug/L	LFA 0200B	11/4/13	104	104	0.470	10.0-130	20
	86411-01	<0.50	40.3	40.3	41.4	40.6	ug/L	EPA 8260B	11/4/13	103	100	2.10	70.0-130	25

Date: 11/06/2013

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

	Spikod	Sample	Spiko	Spike	Spiked	Duplicate Spike	ed	Anglygia	Data	Spiked Sample	Duplicat Spiked Sample	Relative	Spiked Sample Percent	Relative Percent
Parameter	Spiked Sample	Sample Value	Spike Level	Dup. Level	Sample Value	Sample Value	Units	Analysis Method	Date Analyzed	Recov.	Percent Recov.	Percent Diff.	Limit	Diff. Limit
Toluene														
	86411-01	<0.50	40.0	40.0	41.8	41.2	ug/L	EPA 8260B	11/4/13	105	103	1.67	70.0-130	25
Benzene														
	86412-03	22	40.0	40.0	60.1	60.1	ug/L	EPA 8260B	11/5/13	95.8	95.9	0.0564	70.0-130	25
Diisopropyl ethe	er													
	86412-03	<0.50	39.9	39.9	39.6	40.6	ug/L	EPA 8260B	11/5/13	99.3	102	2.50	70.0-130	25
Ethanol														
	86412-03	<5.0	99.3	99.3	105	111	ug/L	EPA 8260B	11/5/13	106	112	5.56	55.0-150	25
Ethyl-tert-butyl		10.50	40.4	10.4	40.4	40.5		EDA 0000D	44/5/40	404	404	0.004	70.0.400	05
Ethylbenzene	86412-03	<0.50	40.1	40.1	40.4	40.5	ug/L	EPA 8260B	11/5/13	101	101	0.384	70.0-130	25
Littyiberizerie	86412-03	<0.50	40.0	40.0	41.8	42.2	ug/L	EPA 8260B	11/5/13	104	106	0.966	70.0-130	25
Methyl-t-butyl e		10.50	40.0	40.0	71.0	72.2	ug/L	LI 74 0200B	11/3/13	104	100	0.500	70.0-100	20
, ,	86412-03	22	39.9	39.9	62.7	64.2	ug/L	EPA 8260B	11/5/13	101	105	3.60	70.0-130	25
P + M Xylene							3							
	86412-03	<0.50	40.0	40.0	40.6	40.7	ug/L	EPA 8260B	11/5/13	102	102	0.161	70.0-130	25
Tert-Butanol														
	86412-03	29	202	202	234	238	ug/L	EPA 8260B	11/5/13	102	104	1.63	70.0-130	25

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Matrix Spike/ Matrix Spike Duplicate

	Spiked	Sample	Spike	Spike	Spiked	Duplicate Spike	e ed	Analysis	Date	Spiked Sample	Duplicat Spiked Sample Percent	Relative	Spiked Sample Percent	Relative Percent Diff.
Parameter	Sample	Sample Value	Level	Dup. Level	Sample Value	Samṗle Value	Units	Method	Analyzed	Recov.	Recov.	Diff.	Limit	Limit
Tert-amyl-meth	yl ether													
	86412-03	<0.50	40.3	40.3	39.2	39.8	ug/L	EPA 8260B	11/5/13	97.1	98.7	1.61	70.0-130	25
Toluene														
	86412-03	<0.50	40.0	40.0	39.6	39.9	ug/L	EPA 8260B	11/5/13	99.1	99.7	0.692	70.0-130	25
Benzene														
	86411-04	<0.50	40.0	40.0	40.6	40.5	ug/L	EPA 8260B	11/4/13	102	101	0.344	70.0-130	25
Diisopropyl eth		0.00					~g/ =	, , , ,						
	86411-04	<0.50	39.9	39.9	42.1	42.5	ug/L	EPA 8260B	11/4/13	106	107	0.981	70.0-130	25
Ethanol														
	86411-04	<5.0	99.3	99.3	87.6	88.3	ug/L	EPA 8260B	11/4/13	88.2	88.8	0.776	55.0-150	25
Ethyl-tert-butyl	ether													
	86411-04	<0.50	40.1	40.1	42.5	42.8	ug/L	EPA 8260B	11/4/13	106	107	0.669	70.0-130	25
Ethylbenzene														
	86411-04	<0.50	40.0	40.0	38.5	38.2	ug/L	EPA 8260B	11/4/13	96.2	95.5	0.737	70.0-130	25
Methyl-t-butyl e														
	86411-04	58	39.9	39.9	99.6	100	ug/L	EPA 8260B	11/4/13	103	105	2.21	70.0-130	25
P + M Xylene							_							
	86411-04	<0.50	40.0	40.0	39.2	38.8	ug/L	EPA 8260B	11/4/13	98.1	97.0	1.16	70.0-130	25

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Matrix Spike/ Matrix Spike Duplicate

Spike Spiked Spiked Sample Sample Relative Per	D:tt
Spiked Sample Spike Dup. Sample Sample Analysis Date Percent Percent Rec Parameter Sample Value Level Level Value Value Units Method Analyzed Recov. Recov. Diff. Lim	cov. Diff. iit Limit
Tert-Butanol	_
86411-04 <5.0 202 202 210 214 ug/L EPA 8260B 11/4/13 104 106 1.84 70.	0-130 25
Tert-amyl-methyl ether	
86411-04 <0.50 40.3 40.3 42.7 43.2 ug/L EPA 8260B 11/4/13 106 107 1.35 70.	0-130 25
Toluene	
86411-04 <0.50 40.0 40.0 40.9 40.7 ug/L EPA 8260B 11/4/13 102 102 0.464 70.	0-130 25
Benzene	
· · · · · · · · · · · · · · · · · · ·	0-130 25
Diisopropyl ether	
· · · · · · · · · · · · · · · · · · ·	0-130 25
Ethanol	
3	0-150 25
Ethyl-tert-butyl ether	
	0-130 25
Ethylbenzene	
o	0-130 25
Methyl-t-butyl ether	
86412-11 <0.50 39.9 39.9 41.0 41.3 ug/L EPA 8260B 11/4/13 103 104 0.713 70.	0-130 25

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Matrix Spike/ Matrix Spike Duplicate

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spike Sample Value	e ed Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicat Spiked Sample Percent Recov.	Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
P + M Xylene														
	86412-11	<0.50	40.0	40.0	39.0	38.2	ug/L	EPA 8260B	11/4/13	97.4	95.6	1.88	70.0-130	25
Tert-Butanol														
	86412-11	<5.0	202	202	207	209	ug/L	EPA 8260B	11/4/13	103	104	0.974	70.0-130	25
Tert-amyl-meth	yl ether													
	86412-11	<0.50	40.3	40.3	43.0	43.0	ug/L	EPA 8260B	11/4/13	106	106	0.00016	70.0-130	25
Toluene														
	86412-11	<0.50	40.0	40.0	40.6	39.6	ug/L	EPA 8260B	11/4/13	102	99.1	2.47	70.0-130	25

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Laboratory Control Sample (LCS)

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.1	ug/L	EPA 8260B	11/4/13	105	70.0-130
Diisopropyl ether	40.0	ug/L	EPA 8260B	11/4/13	108	70.0-130
Ethanol	99.6	ug/L	EPA 8260B	11/4/13	104	55.0-150
Ethyl-tert-butyl ether	40.2	ug/L	EPA 8260B	11/4/13	116	70.0-130
Ethylbenzene	40.1	ug/L	EPA 8260B	11/4/13	107	70.0-130
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	11/4/13	115	70.0-130
P + M Xylene	40.1	ug/L	EPA 8260B	11/4/13	108	70.0-130
TPH as Gasoline	495	ug/L	EPA 8260B	11/4/13	98.4	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	11/4/13	106	70.0-130
Tert-amyl-methyl ether	40.4	ug/L	EPA 8260B	11/4/13	114	70.0-130
Toluene	40.1	ug/L	EPA 8260B	11/4/13	106	70.0-130
Benzene	40.0	ug/L	EPA 8260B	11/4/13	101	70.0-130
Diisopropyl ether	39.9	ug/L	EPA 8260B	11/4/13	101	70.0-130
Ethanol	99.3	ug/L	EPA 8260B	11/4/13	101	55.0-150
Ethyl-tert-butyl ether	40.1	ug/L	EPA 8260B	11/4/13	104	70.0-130
Ethylbenzene	40.0	ug/L	EPA 8260B	11/4/13	104	70.0-130
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	11/4/13	100	70.0-130
P + M Xylene	40.0	ug/L	EPA 8260B	11/4/13	99.4	70.0-130
TPH as Gasoline	493	ug/L	EPA 8260B	11/4/13	96.7	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	11/4/13	101	70.0-130
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	11/4/13	98.4	70.0-130
Toluene	40.0	ug/L	EPA 8260B	11/4/13	101	70.0-130

Date: 11/06/2013

Project Name : **7-Eleven Store #32266**

QC Report : Laboratory Control Sample (LCS)

Parameter	Spike Level	Spike Level Units		Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.9	ug/L	EPA 8260B	11/5/13	98.3	70.0-130
Diisopropyl ether	39.8	ug/L	EPA 8260B	11/5/13	98.4	70.0-130
Ethanol	99.1	ug/L	EPA 8260B	11/5/13	101	55.0-150
Ethyl-tert-butyl ether	40.0	ug/L	EPA 8260B	11/5/13	102	70.0-130
Ethylbenzene	39.9	ug/L	EPA 8260B	11/5/13	102	70.0-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	11/5/13	97.7	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	11/5/13	99.5	70.0-130
TPH as Gasoline	494	ug/L	EPA 8260B	11/5/13	94.5	70.0-130
Tert-Butanol	201	ug/L	EPA 8260B	11/5/13	98.4	70.0-130
Tert-amyl-methyl ether	40.2	ug/L	EPA 8260B	11/5/13	98.0	70.0-130
Toluene	39.9	ug/L	EPA 8260B	11/5/13	98.6	70.0-130
Benzene	40.0	ug/L	EPA 8260B	11/4/13	100	70.0-130
Diisopropyl ether	39.9	ug/L	EPA 8260B	11/4/13	105	70.0-130
Ethanol	99.3	ug/L	EPA 8260B	11/4/13	81.6	55.0-150
Ethyl-tert-butyl ether	40.1	ug/L	EPA 8260B	11/4/13	105	70.0-130
Ethylbenzene	40.0	ug/L	EPA 8260B	11/4/13	95.1	70.0-130
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	11/4/13	99.8	70.0-130
P + M Xylene	40.0	ug/L	EPA 8260B	11/4/13	95.9	70.0-130
TPH as Gasoline	490	ug/L	EPA 8260B	11/4/13	93.7	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	11/4/13	105	70.0-130
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	11/4/13	104	70.0-130

Date: 11/06/2013

QC Report : Laboratory Control Sample (LCS)

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Parameter	Spike	Spike Level Units		Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Toluene	40.0	ug/L	Method EPA 8260B	11/4/13	100	70.0-130
		Ü				
Benzene	40.2	ug/L	EPA 8260B	11/4/13	101	70.0-130
Diisopropyl ether	40.0	ug/L	EPA 8260B	11/4/13	105	70.0-130
Ethanol	99.8	ug/L	EPA 8260B	11/4/13	85.0	55.0-150
Ethyl-tert-butyl ether	40.3	ug/L	EPA 8260B	11/4/13	107	70.0-130
Ethylbenzene	40.2	ug/L	EPA 8260B	11/4/13	96.2	70.0-130
Methyl-t-butyl ether	40.1	ug/L	EPA 8260B	11/4/13	102	70.0-130
P + M Xylene	40.2	ug/L	EPA 8260B	11/4/13	97.8	70.0-130
TPH as Gasoline	495	ug/L	EPA 8260B	11/4/13	96.9	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	11/4/13	105	70.0-130
Tert-amyl-methyl ether	40.5	ug/L	EPA 8260B	11/4/13	107	70.0-130
Toluene	40.2	ug/L	EPA 8260B	11/4/13	102	70.0-130

Chain of Custody Number: 86411

			Sta	ant	tec	: (Cha	ain	-of	Cu	sto	dy	Re	CO	rd							
Field Office: 077 Sacramento Address: 3017 Kilgore Road, Suite 100 Rancho Cordova, CA									Job	Addi Nam ation:	e :	al documents are attached, and are part of this Record. 7-Eleven Store #32266 1339 North Vasco Road Livermore, CA										
Project # 185750084 Task # 200.0410 Project Manager Danielle Manning Laboratory Kiff Analytical Turnaround Time Standard Sampler's Name Brian Branscum				served	3TEX - EPA 8260	TPHd (Diesel Only) 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile rganics 624/8240 (g=GC/MS)	nated Volatiles 10	emi-volatile Organics 25/8270 (GC/MS)	enates :60B		∖naly	sis R	eque	est				r of Containers	
Sampler's Signature Date Time Matrix			HCI-preserved	тРн9/втех	TPHd (I 8015 (m	TPH 41	Aromati 602/802	Volatile rganic 624/8240 (g=0	Halogenat 601/8010	Semi-vola 625/8270	5 Oxygenat EPA 8260B	Ethano EPA 82						Comments/ Instructions		Number		
MW-1 MW-2 MW-3 MW-4 MW-5	10 30 13	1120 1140 1230 1055 1205	Water Water Water Water Water	3 3 3 3	X X X X							x x x x	X X X X								3 3 3 3	0000
Special Instructions/Comments 5 Oxygenates - MtBE, EtBE, DIPE, TAME, TBA Global ID #T10000001067 email EDD to danielle.manning@stantec.com, deborah.lichtenberger@stantec.com email lab report to: deborah.lichtenberger@stantec.com / danielle.manning@stantec.com				Relinquished by: Sign Print Brian Branscum Company Stantec Time 1700 Date 10 311 Relinquished by: Sign Print Company Time Date						313		Received by: Sign Print Company Time Date Received by: Sign Print Company Time Date Received by: Sign Print Company Time Date Time Date					ess Anal	ypul (13	Chain of cu Rec'd in good co Conform Client: Stanted Client Contact: C Client Phone:	f containers: stody seals: ndition/cold: ns to record:	nniı	

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